

# ASSET IoT Gateway

## ABAX6M Datasheet



### OVERVIEW

The ABAX6M IoT Gateway is ideal for monitoring usage and location of all types of machines, trailers, heavy equipment and high-value mobile assets and is designed for rapid return of investment.

It features a waterproof and ruggedized enclosure and a large backup battery when needed. Want to protect it more, then add the special designed steelcage for the ultimate protection.

The ABAX6M enables improved operating efficiency, asset recovery, and streamlined service and maintenance platform with 3 different inputs.

It is part of ABAX IoT global network that combines asset tracking and service and maintenance module solutions in a single platform.

### DESIGNED TO ACCESS THE IOT NETWORK

A gateway of the ABAX global IoT network.

Advanced positioning system simultaneously reads from multiple independent satellite systems including GPS, Glonass, Galileo and BeiDou global navigation satellite systems.

Internal antenna for discreet installation.

Cat-M1 LTE with 2G fallback world wide connectivity to ensure the unit are always online.

Real-time GPS location with live updates.

Automatic OTA (Over The Air update).

### TYPICAL APPLICATIONS

- Service and maintenance for heavy equipment and high-value mobile assets
- Usage logging with 3 separate inputs for all powered assets
- For all machines with intermittent power supply
- Trailers for live trailer tracking
- Powered Assets
  - Construction equipment  
diggers, backhoes, bulldozers, cranes, etc.
  - Forklifts, lifts, dumpers, agriculture
- Road maintenance to monitor usage log for sanding, salting, snow removal etc.

### PRODUCT HIGHLIGHTS

- Track, monitor and optimize asset location
- Ensure your machines have a service plan
- A small solution for trailers with battery backup
- A flexible solution for heavy equipment
- A solution for all kind of mobile assets
- Ruggedized and weatherproof enclosure
- Monitor and increase asset utilization
- Optimize asset pool inventory and location
- Recover lost assets

# ABAX6M Datasheet

## GENERAL SPECIFICATIONS

Dimension	72x72x18.5 mm
Weight	113g without cable
Storage temperature	-40°C to +75°C
Operating temperature	-20°C to +60°C
Vibration approvals	Shock form: half sinus Peak acceleration: 500m/s <sup>2</sup> Shock duration: 6ms Number of shocks: ±10 (X,Y,Z) total =60 Test axes: 3 (±X, ±Y, ±Z)
Supply voltage	6 to 60V - M8 connector
Current usage	Average usage 4,5mA Movement and active 60mA Still and active 30mA Hibernate after ~10 min 1mA
Battery capacity	3400 mAh / 12580 mWh
Charging time	Over 8 hours from 0-100%, unit is delivered with ca 50% battery. 150 cm cable provided
Position updates	Every 60 second when powered and in movement
Number of positions in internal battery mode	500 positions on full battery, provides a position every 24 hour when in battery mode

## ENVIRONMENTAL DATA, RELIABILITY, CERTIFICATION

Approvals	CE, RoHS, REACH,UL
Type Approval	UN ECE R10 Rev.6
IP Grade	IP67

## GPS SPECIFICATIONS

GPS, Glonass, Galileo and BeiDou enabled GNSS module with ultra-high (167dBm) sensitivity and SBAS support. Quick fix using A-GPS

Based on the Ublox NEO-M8 GPS module

Differential GPS enhancements:

- Satellite based augmentation system (SBAS using EGNOS in Europe) for increased accuracy
- Assisted GPS (A-GPS) enabled for ultra-low TTFF (Time To First Fix)
- 1.2 m accuracy under optimal condition

## MOBILE CONNECTIVITY SPECIFICATIONS

Quad band GSM, Cat-M1 LTE connectivity supporting bands B1, B3, B8, B9, B20 and B28 with 2G fallback

GSM network positioning based on antenna site identification

Global support for antenna site triangulation and positioning

Ca. 97% coverage for Europe's GSM network (in terms of GSM positioning)

Timing advance support

## INTERFACES

Radio communication frequency	Bluetooth Smart 5.2
Usage logging or general input	3 0-60V analog input voltage, or 2 0-48V analog input voltage and 1 IO (open drain output) Trigger value for usage log is >8 Volt to start usage logging,
Configuration	Automatic OTA (Over The Air update) firmware and configuration updates
Sensors	Accelerometer, Gyro, GNSS and temperature